

ABSTRACT

A laser oscillation element 1 according to the invention comprises a cholesteric liquid crystal layer 2 containing cholesteric liquid crystals, a cholesteric liquid crystal layer 3 containing cholesteric liquid crystals facing the cholesteric liquid crystal layer 2, and a defect layer 4 containing a dye 5 which emits fluorescence upon optical excitation disposed between the cholesteric liquid crystal layers 2, 3. A selective reflection wavelength band in the cholesteric liquid crystals overlaps with the emission band of the fluorescence emitted by the dye 5, the helical winding directions of the cholesteric liquid crystals contained in the cholesteric liquid crystal layers 2, 3 are identical, and the transition moments of the dye 5 are aligned parallel to the surfaces of the cholesteric liquid crystal layers 2, 3. According to the laser oscillation element 1, a laser oscillation can be generated with high efficiency. Moreover, continuous wave lasing can be generated.